

Application No. 10/691,082
Paper Dated: July 6, 2005
In Reply to USPTO Correspondence of April 7, 2005
Attorney Docket No. 4005-031405

REMARKS

The Office Action of April 7, 2005 has been reviewed and the Examiner's comments carefully considered. The present Amendment amends claims 1 and 18 in accordance with the originally-filed specification. Support for these amendments can be found, for example, in paragraphs [0004], [0005], [0006] and [0030] of the originally-filed specification. Claims 1-28 remain in this application, and claims 1 and 18 are in independent form.

Initially, the Examiner indicates that the title of the invention is not descriptive. In particular, the Examiner requires a new title that is clearly indicative of the invention to which the claims are directed. In response to this objection, and through the foregoing amendment, Applicants have modified the title of the invention and fully incorporated the Examiner's suggested modifications. Specifically, the title of the invention (and application) is now "Identification Apparatus With Automated Signal Receiving Means".

With respect to the claim rejections, claims 1-3, 5 and 10-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,424,262 to Garber et al. (hereinafter "the Garber patent"). In addition, claims 1-10, 12 and 14-28 stand rejected under 35 U.S.C. § 103(a) as being obvious over the Garber patent in view of U.S. Patent No. 3,958,102 to Burt. In view of the following remarks and the foregoing amendments, Applicants respectfully request reconsideration of these rejections.

Independent claim 1 of the present application, as amended, is directed to an identification apparatus for use in connection with a plurality of discrete identity source elements positioned in an identification apparatus signal identification area. In particular, the

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identification apparatus includes at least one signal receiving mechanism for receiving a signal emitted from one or more of the plurality of identity source elements, and the signal receiving mechanism includes a field of detection that comprises at least a portion of the identification apparatus signal identification area. Further, the signal receiving mechanism automatically moves along at least one axis of movement. The apparatus also includes a control mechanism in communication with the signal receiving mechanism to control the movement of the signal receiving mechanism along the axis of movement and/or receive, process and transmit the signal received by the signal receiving mechanism. Still further, the signal receiving mechanism identifies the identity source elements regardless of the orientation or position of the identity source element with respect to the signal receiving mechanism.

Independent claim 18 of the present application, as amended, is directed to a method of receiving a signal from at least one of multiple identity source elements positioned in a signal identification area. The method includes the steps of: (a) automatically moving a signal receiving mechanism along at least one axis of movement; (b) receiving a signal emitted by at least one of the plurality of identity source elements by the signal receiving mechanism regardless of the identity source element orientation or position with respect to the signal receiving mechanism; and (c) controlling the movement of the signal receiving mechanism by a control mechanism.

The Garber patent is directed to applications for radio frequency identification systems. With specific reference to the Examiner's rejection on page 3 of the Office Action, it appears that the Examiner believes that the signal receiving mechanism is configured to move along at least one axis of movement, and the Examiner specifically refers to column 14,

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lines 45-64 of the Garber patent. This portion of the specification of the Garber patent, which is labeled “Portable RFID Devices”, discusses a handheld RFID device for searching along shelves, bins, piles and library cards. Therefore, and obviously, such a handheld device is movable. The handheld RFID device can search wherever it can be positioned close enough to the items, and can identify multiple items that are within the range of the device, which makes this portable device a valuable library tool. An illustration of this portable and handheld device in operation is found in Fig. 13 of the Garber patent.

The Burt patent is directed to an inventory taking system for an automatic warehouse. A laser beam scanner 66 is mounted on a rotatable platform 72 attached by a vertical shaft 74 to a carriage base 76. A rotating motor is mounted to the carriage base 76 and rotates a worm screw 78, which meshes with a gear 80 to rotate the laser beam scanner. In this manner, a thin vertical scanning curtain 70 is rapidly reciprocated in a vertical direction. Upon striking the reflective portions of the code 32, the light beam is reflected back to the lens assembly and directed to a decoder to determine the presence of the bars. It appears that the Examiner believes that such a laser scanner, as disclosed in the Burt patent, functions as a signal receiving means that moves along an axis of movement.

First, with respect to the Examiner’s Section 102 rejection of independent claim 1 in view of the Garber patent, Applicants respectfully submit that the Examiner indeed understands the “automated” nature of the present invention. Specifically, the Examiner has required a new title of invention that specifically references the “automated signal receiving means”, which moves along an axis of movement and is controlled by a control mechanism that is in communication therewith. As discussed above, the Garber patent discloses, in one embodiment, a portable and handheld RFID device that a person must manually move around

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in order to read the tags. As seen in Fig. 13 of the Garber patent, a person is holding this handheld device and moving it back and forth across library books in order to identify the location or presence of these tagged books.

Independent claims 1 and 18 have been modified to better clarify the “automated” function and structure of the identification apparatus of the present invention. In particular, these claims now specifically recite that the signal receiving mechanism is configured to automatically move along at least one axis of movement. Such automated movement is clearly not a feature of the systems and devices of the Garber patent.

Another drawback of the Garber patent that is overcome by the present invention is the necessary alignment of the tags with respect to the signal receiving mechanism. For example, as seen in the portable, handheld RFID device embodiment of the Garber patent, and as illustrated in Fig. 13, the tags and the books must be specifically aligned in order to be read by the signal receiving device. Such handheld systems are well known in the art and employed in many applications, such as in law firms and the like, where files are tagged and scanned in order to identify their location. It should be noted that these files, much like the books in the Garber patent, must be specifically aligned in order for this handheld device to effectively identify them.

Independent claims 1 and 18 have been further modified to specifically recite that the signal receiving mechanism is configured to identify the identity source elements regardless of the orientation or position of the identity source element with respect to the signal receiving mechanism. In fact, it is just this drawback that the present invention overcomes, by moving the signal receiving mechanism or antenna in various directions in order to properly identify all tags regardless of orientation or position. In particular, the

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identification apparatus of the present invention is an automated antenna that moves below an inventory, such that its recognition field moves and recognizes all manner and orientation of the associated tags. The Garber patent requires alignment in order to identify various items, tags and/or identity source elements.

For the foregoing reasons, it is respectfully submitted that the Garber patent does not teach or suggest an identification apparatus including a signal receiving mechanism that automatically moves along at least one axis of movement, where the signal receiving mechanism identifies the identity source elements regardless of the orientation or position of the identity source element with respect to the signal receiving mechanism, as specifically set forth in independent claims 1 and 18 of the present application.

Next, with respect to the Examiner's Section 103 rejection of the claims in view of the Garber patent and Burt patent, Applicants respectfully submit the following. The Burt patent is a line-of-sight signal processing operation for taking inventory in an automated warehouse setting. As discussed above, the laser beam scanner 66 rotates and projects a thin vertical scanning curtain 70 in a vertical direction. This scanning curtain 70 must strike the reflective portions of the code 32 in order to bounce back and be read and decoded by the assembly. Therefore, if the tags with the barcodes are not directly facing or in the line-of-sight of the laser beam scanner 66 (or vertical scanning curtain 70), the tags will not be read and the item will not be inventoried. Therefore, unlike the present invention, the system of the Burt patent does not include a signal receiving mechanism that identifies the identity source elements (or tags) regardless of the orientation or position of the identity source elements (or tags) with respect to the signal receiving mechanism.

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As discussed above, such a limitation has been placed in both independent claims 1 and 18 of the present application. Accordingly, neither the Garber patent nor the Burt patent whether used alone or in combination, teaches or suggests an identification apparatus that includes a signal receiving mechanism for identifying the identity source elements regardless of the orientation or position of the identity source elements with respect to the signal receiving mechanism, as specifically set forth in independent claims 1 and 18 of the present application.

For all the foregoing reasons, independent claims 1 and 18 are not anticipated by or rendered obvious over the Garber patent, the Burt patent, or any of the remaining prior art of record, whether used alone or in combination. There is no hint or suggestion in any of the references cited by the Examiner to combine these references in a manner which would render the invention, as claimed, obvious. On this basis, reconsideration of the rejection of independent claims 1 and 18 is respectfully requested.

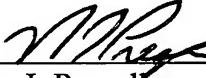
Claims 2-17 depend either directly or indirectly from and add further limitations to independent claim 1 and are believed to be allowable for the reasons discussed hereinabove in connection with independent claim 1. Further, claims 19-28 depend either directly or indirectly from and add further limitations to independent claim 18 and are believed to be allowable for the reasons discussed hereinabove in connection with independent claim 18. In addition, many of the dependent claims include further novel and non-obvious features that provide additional function and beneficial structural limitations to the independent claims. Therefore, for all the above reasons, reconsideration of the rejections of claims 2-17 and 19-28 is respectfully requested.

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For all the foregoing reasons, Applicants believe that claims 1-28, as amended, are patentable over the cited prior art and in condition for allowance. Reconsideration of the rejections and allowance of all pending claims 1-28 are respectfully requested.

Respectfully submitted,

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